WE CLAIM:

1.   A method of simulating a system having a software component and a hardware component, said method comprising the steps of:

(i)   generating with a test controller a software stimulus for said software component and a hardware stimulus for said hardware component, said software stimulus and said hardware stimulus being associated so as to permit verification of correct interaction of said software component and said hardware component;

(ii)   modelling operation of said software component in response to said software stimulus using a software simulator; and

(iii)   modelling operation of said hardware component in response to said hardware stimulus using a hardware stimulator; wherein

(iv)   said hardware simulator and said software simulator are linked to model interaction between said hardware component and said software component; and

(v)   said software stimulus is passed to said software simulator by issuing a remote procedure call from said test controller to said software simulator.

2.   A method as claimed in claim 1, wherein said test controller issues said remote procedure call by writing call data specifying said software stimulus to a shared memory, said software simulator reading call data from said shared memory to trigger modelling of operation of said software component in response to said software stimulus.

3.   A method as claimed in claim 2, wherein said test controller sets a start flag within said shared memory to indicate to said software simulator that said shared memory contains call data specifying a software stimulus to be modelled.

4.   A method as claimed in claim 3, wherein said software simulator polls said start flag to determine if there is a software stimulus to be modelled.

5.   A method as claimed in claim 3, wherein said software stimulator resets said start flag to indicate to said test controller that modelling of said software stimulus has been completed.

6.   A method as claimed in claim 2, wherein said call data includes one or more of:

       (i)   data identifying a software routine to be modelled within said software component; and

       (ii)   variable data to be used in responding to said software stimulus.

7.   A method as claimed in claim 1, wherein said hardware component is a hardware peripheral within a data processing system.

8.   A method as claimed in claim 1, wherein said software component is a software driver for said hardware component.

9.   A method as claimed in claim 1, further comprising monitoring modelled signals at an interface with said hardware component that are generated in response to simulation of said software component and said hardware component.

10.   A method as claimed in claim 9, wherein said modelled signals are monitored for compliance with rules defining permitted values for said modelled signals.

11.   A method as claimed in claim 1, wherein said software simulator is monitored to determine coverage of a range of software stimuli that may be applied to said software simulator.

12.   A method as claimed in claim 1, wherein said hardware simulator is monitored to determine coverage of a range of hardware stimuli that may be applied to said hardware simulator.

13.   A method as claimed in claim 1, wherein said software simulator is an instruction set simulator that serves to model execution of software program instruction by a data processing core.

14.   A method as claimed in claim 1, further comprising monitoring said hardware simulator to detect expected changes of state within said hardware component occurring in response to said software stimulus.

15.   Apparatus for simulating a system having a software component and a hardware component, said apparatus comprising:

(i)   a test controller operable to generate a software stimulus for said software component and a hardware stimulus for said hardware component, said software stimulus and said hardware stimulus being associated so as to permit verification of correct interaction of said software component and said hardware component;

(ii)   a software simulator operable to model operation of said software component in response to said software stimulus; and

(iii)   a hardware simulator operable to model operation of said hardware component in response to said hardware stimulus; wherein

(iv)   said hardware simulator and said software simulator are linked to model interaction between said hardware component and said software component; and

(v)   said software stimulus is passed to said software simulator by issuing a remote procedure call from said test controller to said software simulator.

16.   A computer program product for controlling a computer to simulate a system having a software component and a hardware component, said computer program product comprising:

(i)   test controller logic operable to generate a software stimulus for said software component and a hardware stimulus for said hardware component, said software stimulus and said hardware stimulus being associated so as to permit verification of correct interaction of said software component and said hardware component;

(ii)   software simulator logic operable to model operation of said software component in response to said software stimulus; and

(iii)   hardware simulator logic operable to model operation of said hardware component in response to said hardware stimulus; wherein

(iv)   said hardware simulator logic and said software simulator logic are linked to model interaction between said hardware component and said software component; and

(v)   said software stimulus is passed to said software simulator logic by issuing a remote procedure call from said test controller logic to said software simulator logic.